MNM Fatal 2014-03

- Falling/Sliding Material
- February 28, 2014 (New York)
- Sand & Gravel Mine
- Supervisor
- 50 years old
- 27 years of experience

Overview

The victim was killed when went to the mine's reclamation dump site to investigate a report of smoke sighted at that area. He traveled to the site with another miner, parked his truck, and started to climb an embankment. When the victim climbed approximately 40 feet, the embankment failed and engulfed him.

The accident occurred due to the management's failure to establish methods to maintain the slope stability at the reclamation dump site where miners worked or traveled in performing their assigned tasks. The material being used to reclaim the area was a mixture of approximately 70 percent loam and 30 percent mulch. The moisture content, the frozen condition, and the fibrous nature of the loam/mulch mixture could have allowed the material to hold itself in a slightly over-steepened state. The material dumped on the day of the accident added an additional load and could have created a slope that was marginally stable. The relatively warm material (woody mulch) could have thawed the frozen mulch already in place. A combination of these factors caused a temporary reduction of shear strength within the reclamation material causing the marginally stable slope to fail.

Root Cause

Root Cause: Management failed to establish methods to maintain the slope stability at the reclamation dump site where miners worked or traveled in performing their assigned tasks. The approximately 80-foot high embankment failed and engulfed the victim.

Corrective Action: Management modified the reclamation plan at the mine to include using additional material fill to form a flatter slope which can be maintained using a dozer. In addition, management abandoned the lower access road by permanently blocking the east and west approaches to the roadway. These revisions eliminate the need for persons to travel near the base of the slope.

Best Practices

- Establish and discuss safe work procedures before beginning work. Identify and control all hazards associated with the work to be performed and the methods to properly protect persons.
- Task train all persons to recognize all potential hazardous conditions that can decrease bank or slope stability and ensure they understand safe job procedures for elimination of the hazards.
- Prior to beginning work and as ground conditions warrant during the shift, examine all pit, highwall, slope, and bank conditions. Be especially vigilant for these conditions after each rain, freeze, or thaw.
- Use mining methods that ensure pit, highwall, slope, and bank stability and safe working conditions.
- Correct hazardous conditions by working from a safe location.
- Stay clear of potentially unstable areas.